

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-23313; Directorate Identifier 2005-NM-111-AD; Amendment 39-14573; AD 2006-09-03]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 727, 727C, 727-100, and 727-100C Series Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Boeing Model 727, 727C, 727-100, and 727-100C series airplanes. This AD requires repetitive inspections for cracks in the body skin and bear strap at the upper and lower hinge cutouts of the mid-cabin galley doorway, along the upper fastener row of the stringer 14R lap splice, and in the doorstop fitting adjacent to the upper hinge cutout; and corrective action if necessary. This AD also provides for optional terminating action for certain inspections. This AD results from reports of skin and bear strap cracking at the upper and lower hinge cutout and along the upper fastener row of the stringer 14R lap splice, and cracking in the doorstop fitting adjacent to the upper hinge cutout. There are also reports of cracking on airplanes previously modified in production to resist such cracking. We are issuing this AD to find and fix fatigue cracking of the fuselage, which could result in reduced structural integrity and consequent rapid decompression of the airplane.

DATES: This AD becomes effective May 31, 2006.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of May 31, 2006.

ADDRESSES: You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC.

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for the service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Daniel F. Kutz, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6456; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the airworthiness directive (AD) docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to all Boeing Model 727, 727C, 727-100, and 727-100C series airplanes. That NPRM was published in the Federal Register on December 15, 2005 (70 FR 74237). That NPRM proposed to require repetitive inspections for cracks in the body skin and bear strap at the upper and lower hinge cutouts of the mid-cabin galley doorway, along the upper fastener row of the stringer 14R lap splice, and in the doorstop fitting adjacent to the upper hinge cutout; and corrective action if necessary. That NPRM also proposed to provide for optional terminating action for certain inspections.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received from one commenter, the airplane manufacturer.

Request To Clarify Description of the Unsafe Condition

Boeing asks that the description of the unsafe conditions, as specified in paragraph (d) of the NPRM, be changed for clarification, to add the following: "There are also reports of cracking on airplanes modified in production to resist such cracking." Boeing states that "The modification installed in production was to enlarge the cutout radius. This did not prevent cracking, but rather resisted and delayed cracking to a later time."

We infer that Boeing is asking for a change to the Summary section, as well as the second sentence in paragraph (d) of this AD. These paragraphs describe what prompted the AD. In the Discussion section of the NPRM we did note that modifications done in production did not prevent cracking. Therefore, we agree to clarify paragraph (d) and the Summary section as follows: "There are also reports of cracking on airplanes previously modified in production to resist such cracking."

Request To Change the Discussion Section

Boeing asks that the eighth and ninth sentences in the Discussion section of the NPRM be changed. Those sentences are as follows: "Some of the cracks were found on airplanes that were modified in service by increasing the radius of the corners of the body skin at the hinge cutouts, and installing doublers at the high cutouts; and airplanes on which the equivalent modification was done in production. These modifications did not prevent the cracking." Boeing asks that those sentences be changed to the following: "Some of the cracks found on airplanes that were modified in production by increasing the radius of the cutout corners of the body skin hinge cutouts (sic). This modification did not prevent the cracking." Boeing states that this would correctly reflect that production modifications included only increasing the skin cutout radius and did not include installing skin doublers in the hinge areas. Boeing adds that production records indicate that no doublers were installed in production.

We acknowledge Boeing's concern and agree with the comment. No cracks have been reported yet on airplanes that were modified in service using Boeing Service Bulletin 727-53-0054, which increases the radius of the cutout corners of the body skin hinge cutouts, and adds skin doublers in the hinge areas. However, the "Discussion" section is included in an NPRM as background information on the unsafe condition to provide adequate information to the public during the comment period. The "Discussion" section is not included in the final rule. We have made no change to the AD in this regard.

Request To Change the Other Relevant Rulemaking Section

Boeing asks that the fifth sentence in the Other Relevant Rulemaking section of the NPRM be changed. That sentence specifies "One of the structural modifications in that AD is of the body skin of the mid-galley door hinge cutouts done in accordance with Boeing Service Bulletin 727-53-0054, Revision 1, dated November 16, 1989." Boeing asks that the sentence be changed to the following, "One of the structural modifications in that AD is of the body skin of the mid-galley door hinge cutouts, done in accordance with Boeing Service Bulletin 727-53-0054, initial release, dated June 26, 1968, with additional instructions shown in Boeing Document D6-54860, Rev C, page 3.2.1 for Boeing Service Bulletin 727-53-0054." Boeing states that the airplane effectivity specified in Revision 1 increased by three airplanes.

We acknowledge Boeing's concern and agree with the comment. In addition, we note that Boeing Document D6-54860, Rev C, specifies the airplane effectivity per the latest revision of the service bulletin, which is Service Bulletin 727-53-0054, Revision 1, which did include three additional airplanes. However, the "Other Relevant Rulemaking" section of the NPRM is not included in the final rule. We have made no change to the AD in this regard.

Conclusion

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

There are about 232 airplanes of the affected design in the worldwide fleet. This AD affects about 123 airplanes of U.S. registry. The following table provides the estimated costs for U.S. operators to comply with this AD, per inspection cycle.

ESTIMATED COSTS			
Airplane group	Work hours	Average hourly labor rate	Cost per airplane
Group 1, Configuration 1	10	\$65	\$650
Group 1, Configuration 2	10	65	650
Group 1, Configuration 3	9	65	585
Group 2	9	65	585

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in subtitle VII, part A, subpart III, section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

www.faa.gov/aircraft/safety/alerts/

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2006-09-03 Boeing: Amendment 39-14573. Docket No. FAA-2005-23313; Directorate Identifier 2005-NM-111-AD.

Effective Date

- (a) This AD becomes effective May 31, 2006.

Affected ADs

- (b) This AD is related to AD 98-11-03, amendment 39-10530, as corrected by AD 98-11-03 R1, amendment 39-10983.

Applicability

- (c) This AD applies to all Boeing Model 727, 727C, 727-100 and 727-100C series airplanes, certificated in any category.

Unsafe Condition

- (d) This AD results from reports of skin and bear strap cracking at the upper and lower hinge cutout and along the upper fastener row of the stringer 14R lap splice, and cracking in the doorstop fitting adjacent to the upper hinge cutout. There are also reports of cracking on airplanes previously modified in production to resist such cracking. We are issuing this AD to find and fix fatigue cracking of the fuselage, which could result in reduced structural integrity and consequent rapid decompression of the airplane.

Compliance

- (e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Service Bulletin Reference

- (f) The term "alert service bulletin," as used in this AD, means Boeing Alert Service Bulletin 727-53A0228, dated March 24, 2005.

Repetitive Inspections

(g) Accomplish the applicable inspections for any cracks (including stop-drilled, trimmed-out, or repaired cracks) in the body skin and bear strap at the upper and lower hinge cutouts of the mid-cabin galley doorway, along the upper fastener row of the stringer 14R lap splice, and in the doorstop fitting adjacent to the upper hinge cutout, as specified in Table 1 of paragraph 1.E. "Compliance" of the alert service bulletin. Accomplish the inspections at the applicable compliance time specified in Table 1 of paragraph 1.E.; except, where Table 1 specifies a compliance time relative to the date of the release of the alert service bulletin, this AD requires compliance relative to the effective date of this AD. Accomplish the inspections by doing all the applicable actions specified in the Accomplishment Instructions of the alert service bulletin. Inspections of door stop fittings made of 7075 material having part number (P/N) 65-23674-7 are not required. Repeat the applicable inspection at the applicable repeat interval specified in Table 1 of paragraph 1.E. of the alert service bulletin.

Corrective Action

(h) If any cracking is found during any inspection required by paragraph (g) of this AD, repair the cracking and repeat the inspection at the applicable compliance time specified in Table 1 of paragraph 1.E. "Compliance" of the alert service bulletin. Do the repair by doing all the applicable actions specified in the Accomplishment Instructions of the alert service bulletin. Where the alert service bulletin specifies to report cracking to Boeing for repair instructions: Before further flight, repair any cracking according to a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or using a method approved in accordance with paragraph (j)(3) of this AD.

Optional Terminating Action

(i) Replacement of the doorstop fitting with a fitting made of 7075 material having P/N 65-23674-7, in accordance with the Accomplishment Instructions of the alert service bulletin, terminates the repetitive inspections of that fitting, as required by paragraph (g) of this AD.

Alternative Methods of Compliance (AMOCs)

(j)(1) The Manager, Seattle ACO, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) The inspection methods specified in Figures 9 through 12 of the alert service bulletin, as required by paragraph (g) of this AD, at the thresholds and intervals specified in paragraph (g), are approved as a method of compliance (MOC) to paragraph (b) of AD 98-11-03 and 98-11-03 R1, for the inspections of Structurally Significant Item F-16A, Supplemental Structural Inspection Document D6-48040-1, affected by the repair or modification. The MOC applies only to the areas inspected in accordance with Boeing Alert Service Bulletin 727-53A0228, dated March 24, 2005. All provisions of AD 98-11-03 R1 that are not specifically referenced in this paragraph remain fully applicable and must be complied with.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD, if it is approved by an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization who has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane and the approval must specifically refer to this AD.

(4) Before using any AMOC approved in accordance with 14 CFR 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

Material Incorporated by Reference

(k) You must use Boeing Alert Service Bulletin 727-53A0228, dated March 24, 2005, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on April 17, 2006.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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